

Work Order ID 121643

121643

Page 1

September-16-14 12:34:50 PM

Item ID: D2521 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Individual Bearpaw
 Start Date: 6/26/14 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 6/26/14 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: W Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr | Revision Nbr | | | | | | | | |

| | | | | | | | | | |
|-------|-------|--|--|--|--|--|--|--|--|
| D2521 | Rev J | | | | | | | | |
|-------|-------|--|--|--|--|--|--|--|--|

105 0.00
105
 Purchasing
 Purchasing
 Memo
 ISSUE PO 25839
 Cut Blank per D2521 file
CZ 14/08/18 4

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
 Packaging
 Packaging
 Memo
14/10/01 (4)

115 QC6- Inspect dimensions to drawing 0.00
115
 QC
 Quality Control
 Memo
CZ 14/10/21 4

Page 2

September-16-14 12:34:50 PM

Setup Start *NS1*

Stop *NS2*

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run** **Start** ***NR1***
 QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

130

130

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio and Dwg D2521 Identify as D2521
3-Deburr

0.00

0.00

140

140

OC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

150

150

QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

4 0

4 0

4 0 JFL 2014-10-23

121643

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

4

Cust Item ID:

4

Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

**Insp.
Stamp**

0.00

160

Packaging

Memo

0.00

Packaging

4x PPP 121/04

$$\frac{4}{x}$$

DAS
26
9-89

NOV 24 2014

0.00

170

QC

Memo

0.00

Quality Control

14/12/2028

11/11/28

Picklist Print

Thursday, June 26, 2014 3:05:27 PM

Page 1

Work Order ID: 121643

121643

Parent Item: D2521

D2521

Parent Item Name: Individual Bearpaw

Start Date: 6/26/14

Required Date: 6/26/14

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A 08-10-01 New Manufacturing Method JLM Verified By:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| MUHMWB10 | | Purchased | | No | | | sf | 545.9000 | | 30 | | | |

MIJHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

CY 14/10/03

Location

Loc Qty

Loc Code

MAT

172.6

m129293

172.6

MAT018

373.3

m128267

47

m128668

326.3

M130421

X30

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

| | | |
|--|--|---|
| Work Order: _____ Part No. _____ NCR No. _____ | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/> | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> |
|--|--|---|

| Root Cause | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|---|-------------------|--------------------|-------------|--------------|--------------|
| Design | | | | | | | | | |
| Doc/Data | | | | | | | | | |
| Equip/Tooling | | | | | | | | | |
| Handling/Pre | | | | | | | | | |
| Material | | | | | | | | | |
| Operator | | | | | | | | | |
| Offset/Setup | | | | | | | | | |
| Process | | | | | | | | | |
| Supplier | | | | | | | | | |
| Training | | | | | | | | | |
| Transport | | | | | | | | | |
| Unapproved | | | | | | | | | |

FAULT CATEGORY

| | | | |
|--|--|---|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other |
|--|--|---|--|

| | | | |
|--|--|---------------------|--------|
| DART AEROSPACE LTD | | Work Order: | 121693 |
| Description: Bearpaw | | Part Number: | D2521 |
| Inspection Dwg: D2521 Rev: J | | Page 1 of 1 | |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

| Inspection Sheet Drawing Dimension | | | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|------------------------------------|--------|--------|------------------|--------|--------|----------------------|----------|
| Dim | Min | Max | | | | | |
| A | 0.260 | 0.266 | .260 | ✓ | | CNC-02 | |
| B | 0.90 | 0.96 | .930 | ✓ | | | |
| C | 0.27 | 0.330 | .310 | ✓ | | | |
| D | 0.470 | 0.530 | .500 | ✓ | | | |
| E | 21.740 | 21.760 | 21.745 | ✓ | | | |
| F | 0.72 | 0.780 | .750 | ✓ | | | |
| G | 0.35 | 0.410 | .380 | ✓ | | | |
| H | 11.490 | 11.570 | 11.500 | ✓ | | | |
| I | 3.41 | 3.47 | 3.430 | ✓ | | | |
| J | 11.790 | 11.810 | 11.795 | ✓ | | | |
| K | 9.47 | 9.53 | 9.496 | ✓ | | | |
| L | 7.190 | 7.210 | 7.196 | ✓ | | | |
| M | 6.910 | 6.970 | 6.934 | ✓ | | | |
| N | 44.47 | 44.530 | 44.500 | ✓ | | LR LP-12 | |
| O | 6.590 | 6.650 | 6.620 | ✓ | | | |
| P | 0.940 | 0.980 | .962 | ✓ | | | |
| Q | 18.97 | 19.03 | 18.990 | ✓ | | | |
| R | 0.350 | 0.410 | .380 | ✓ | | | |
| S | 0.740 | 0.780 | .763 | ✓ | | | |
| T | 0.240 | 0.280 | .252 | ✓ | | | |
| U | 0.370 | 0.410 | .388 | ✓ | | | |
| V | 0.740 | 0.780 | .753 | ✓ | | | |
| W | 0.740 | 0.780 | .763 | ✓ | | | |
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|---------------------|------------|
| Measured by: | JFL 10/21 |
| Date: | 2014-10-21 |

| | |
|--------------------|------------|
| Audited by: | JFL |
| Date: | 2014-10-23 |

| | |
|----------------------------|-----|
| Prototype Approval: | N/A |
| Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|---|------------|----------|
| A | 03.09.22 | New Issue P/O D205-564-011 & D430-688-011 | KJ/RF | |
| B | 05.06.15 | Dimensions and tolerances changed | KJ/RF | |
| C | 06.08.31 | Dimensions updated per D2521 Rev. J | KJ/JLM | |



| | | | |
|-------------------------|-----------------|--|------------------------|
| DESIGN # | DRAWN BY C B | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED CP | APPROVED # | DRAWING NO. D2521 | REV. J SHEET 1 OF 3 |
| DATE 06.07.28 | | TITLE 205 BEARPAW | SCALE NTS |
| A | 95.11.28 | NEW ISSUE | |
| B | 96.01.11 | SHOW BENDING MOVE HOLES | |
| C | 96.01.29 | ADJUST HOLE LOCATION FOR TOOLING | |
| D | 96.05.14 | ADJUSTED BEAR PAW THICKNESS | |
| E | 96.12.18 | 43.500 WAS 46.750 | |
| F | 97.05.07 | ADDED REAR POCKET, MOVED HOLES | |
| G | 98.08.06 | ADD C'BORE AND CHAMFER EDGES | |
| H | 03.01.30 | CHANGE GEOMETRY FOR RUN-ON LDG. | |
| I | 05.05.20 | REMOVE BEND; CHANGE TOLERANCES | |
| J | 06.07.28 | CHANGE FOR FLOAT SKIDTUBE | |

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WITHOUT NOTICE
WORK ORDER
NO 121643 M15
140630

RELEASED

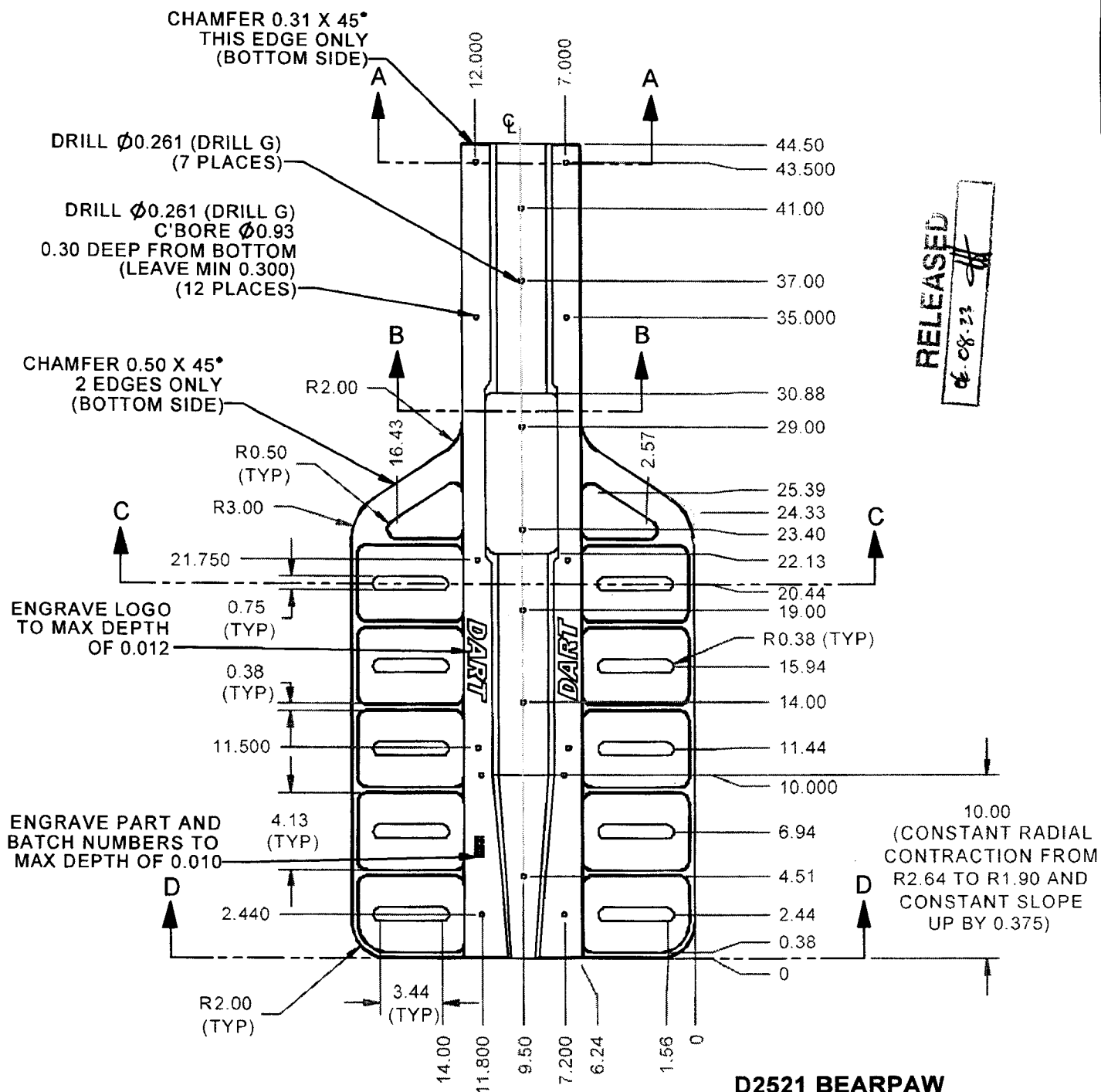
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DART

| | | | |
|------------------|-------------------------|---|--------|
| DESIGN # | DRAWN BY CB | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED CP | APPROVED [Signature] | DRAWING NO. D2521 | REV. J |
| DATE 06.07.28 | TITLE 205 BEARPAW | SHEET 2 OF 3 SCALE 1:8 | |

**NOTES:**

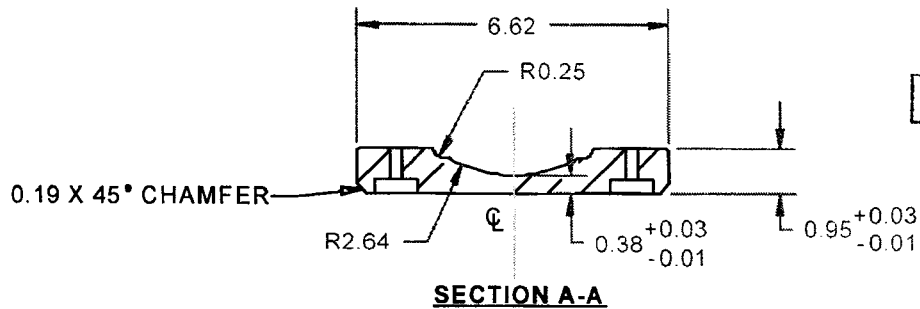
- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK (MACHINE TO 0.950)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.030
- 6) PART IS SYMMETRIC ABOUT C

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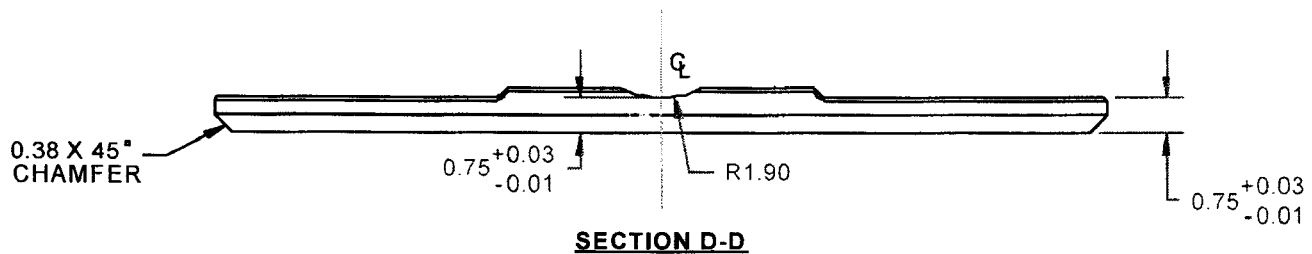
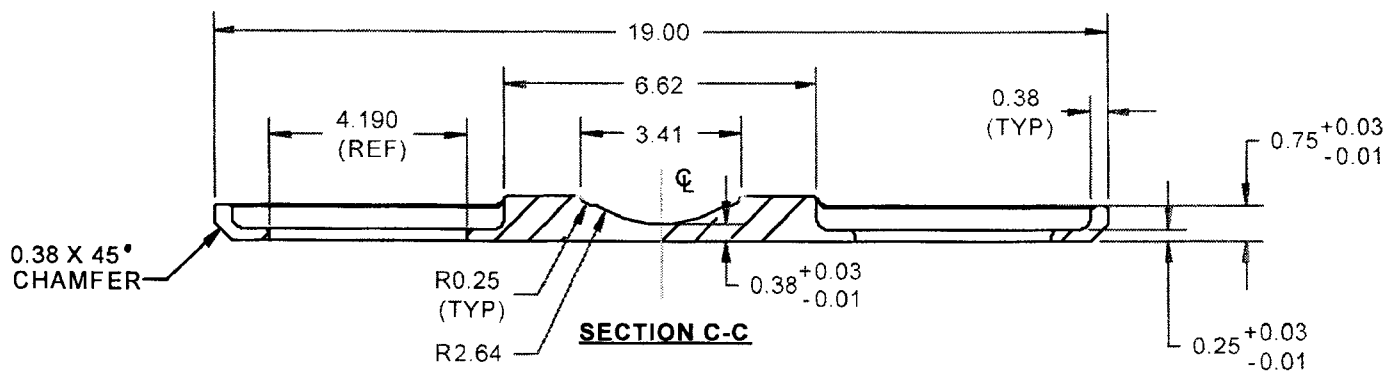
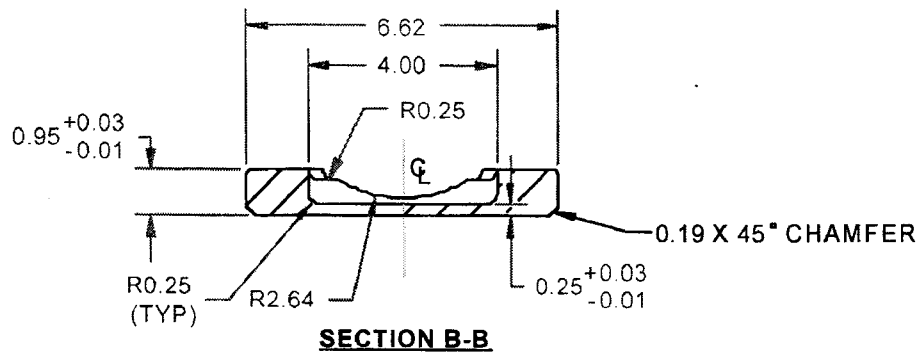


| | | | |
|------------------|----------------------|---|------------------------|
| DESIGN # | DRAWN BY C.B. | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED # | APPROVED # | DRAWING NO. D2521 | REV. J SHEET 3 OF 3 |
| DATE 06.07.28 | TITLE 205 BEARPAW | | SCALE 1:4 |



RELEASED

06.08.23



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T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 6316
Date: 2014-09-29
Page: 1

| | |
|--|--|
| Sold to: Dart Aerospace Michael Grégoire 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada | Ship to: Dart Aerospace Michael Grégoire 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada |
| Order No.: 100810 | Sold By: JONATHAN LESSARD |
| Shipped By: | Ship Date: 2014-09-29 |
| Tracking No.: | |

| Item No. | Unit | Description | Quantity |
|--|--------|-------------------|----------|
| d2432-3 | Chaque | d2432-3 bearpaw | 2 |
| d2435 | Chaque | d2435 bearpaw | 18 |
| d2521 | Chaque | d2521 bearpaw | 22 |
| d2432 | Chaque | d2432 bearpaw | 15 |
| d4930-1 | Chaque | d4930-1 bearpaw | 8 |
| d4355-1 | Chaque | d4355-1 bearpaw | 7 |
| d4353-041 | Chaque | d4353-041 bearpaw | 2 |
| d4297-1 | Chaque | d4297-1 bearpaw | 2 |
| d2995 | Chaque | d2995 bearpaw | 2 |
| | | d25535 | |
| Comment: Des frais d'intérêts de 2% / mois seront chargés sur tout compte passé du après 30 jours | | | |